

1.3 Education Plan

Curriculum and Instructional Design 14 Del. C. §§ 512(4)-(8) and (11)

1. Provide a synopsis of the proposed educational program, including key components ...

LTA has adopted two Archways as its program of study with an integration of health and wellness. The Archways are: Biomedical and Global Health Sciences (with ConnectEd Integrated Curriculum Units) and Processes of Design and Engineering (CTE).

LTA will infuse The Whole School, Whole Community, Whole Child (WSCC) model (<http://www.ascd.org/programs/learning-and-health/wsc-model.aspx>) into its STEM curriculum. The model expands on the eight elements of the CDC's Coordinated School Health (CSH) approach and is combined with the whole child framework. As stated on the CDC's website, CDC and the Association of Supervision and Curriculum Development (ASCD) developed this expanded mode in collaboration with key leaders from the fields of health, public health, education, and school health. This model is designed to strengthen a unified and collaborative approach to improve learning and health in our nation's schools.

Biomedical and Global Health Sciences Pathway/Archway

LTA has formed a partnership with Project Lead the Way (PLTW) and ConnectEd for its Biomedical and Global Health Sciences curriculum model. PLTW notes that the U.S. became a global leader through the ingenuity of its scientists, engineers, and creative minds. At the heart of these advancements are science, technology, engineering, and math (STEM) subjects. PLTW states that the rigorous and relevant four-course PLTW Biomedical sequence allows students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students engage in activities like investigating the death of a fictional person to learn content in the context of real-world cases. They examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease; all while working collaboratively to understand and design solutions to the most pressing health challenges of today and the future. Each course in the Biomedical Science sequence builds on the skills and knowledge students gain in the preceding courses. LTA will offer three PLTW Biomedical and Global Health Sciences foundation courses within a period of three academic years from the start of implementation. The capstone course will be offered in year four. The courses are: Principles of Biomedical Science – Grade 9, Human Body Systems – Grade 10, Medical Interventions – Grade 11, and Biomedical Innovation – Grade 12 (capstone course).

See <http://gettingsmart.com/2013/04/blended-stem-project-lead-the-way/>. ConnectEd brings STEM to life with linked learning. The curriculum used in LTA's Archways is different from that in a traditional high school program. It designs lessons around real-world industry themes, engaging students through both challenging academic and demanding technical instruction. Teams including both academic and technical teachers collaborate to plan and implement these integrated project-based units throughout the year. For example, students in a building and engineering Archway might learn about geometry and algebra while designing and building a structure. Those in an arts, media, and entertainment Archway might learn persuasive writing skills while developing business plans, or creative writing skills while drafting scripts. This

curriculum makes learning exciting because students can see the relevance of academic subjects to practical applications. It also helps students with diverse interests and learning styles master the rigorous content that California's academic standards require. See (<http://www.connectedcalifornia.org/curriculum>)

Processes of Design and Engineering Archway – Supported by Engineering by Design™ (EbD) International Technology and Engineering Educators Association (ITEEA)

The educational aim of the Processes of Design and Engineering curriculum at LTA is to combine the basic competences of engineers and designers to develop the framework for a strong interdisciplinary cooperation. LTA will use the Delaware CTE program of study model: Engineering Design I -- Grade 9, Engineering Design II -- Grade 10, Engineering Design III -- Grade 11, and Engineering Design IV -- Grade 12 (capstone course). During four years of study a firm basis in the design and engineering theories will be built and a whole set of professional skills of both disciplines will be developed. Besides the three core study areas of design and engineering, students will get a firm understanding of a contemporary entrepreneurial world in the fourth course during their senior year. The core of the course is formed around development projects run in multidisciplinary teams and industry partners.

Delaware Department of Education Career and Technical Education Department (CTE) is a member of the Engineering by Design™ Consortium Engineering by Design (EbD). See website (<http://iteea.org/>). The Engineering by Design™ Program is built on the belief that the ingenuity of children is untapped, and is unrealized potential, that, when properly motivated, will lead to the next generation of technologists, innovators, designers, and engineers. See website (http://www.iteea.org/EbD/Resources/EbD-CommonCore_HighSchool.pdf.) for EbD Standards-Based Model Program.

The Carl D. Perkins Career and Technical Education Act of 2006 requires eligible recipients of Perkins funds to have a functioning program of study. LTA will utilize the Delaware CTE Programs of study (POS) which will provide successful student transitions between secondary and postsecondary education by identifying sequences of academic and CTE coursework to help students attain a postsecondary degree or industry-recognized certificate or credential. LTA will meet the following criteria defined in Section 122(2)(c)(1)(A):

- (i) The career and technical programs of study, (by adopting the standards of local educational agencies and postsecondary institutions to be offered as an option to students and their parents as appropriate) when planning for and completing future coursework, for career and technical content areas that – incorporate secondary education and postsecondary education elements;
- (ii) Include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education;
- (iii) May include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and

(iv) Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

A POS is a comprehensive, structured approach for delivering academic and CTE to students to enable them to prepare for postsecondary education and career success. This is a U.S. Department of Education Operational Definition. See website (<http://www.doe.k12.de.us/infosuites/ddoe/aboutdoe/workgroups/cte.shtml>) 525 Requirements for Career and Technical Education Programs. (<http://regulations.delaware.gov/AdminCode/title14/500/525.shtml>)

Wellness Integration

See *Appendix 1 Section 1.3* for the effective National Health Education Standards (NHES) that LTA will foster or see website (<http://www.cdc.gov/HealthyYouth/SHER/standards/index.htm>).

LTA will also promote CDC's state-of-the-art health education curricula characteristics; which reflect the growing body of research that emphasizes the following:

- Teaching functional health information (essential knowledge)
- Shaping personal values and beliefs that support healthy behaviors
- Shaping group norms that value a healthy lifestyle

See website (<http://www.cdc.gov/healthyyouth/SHER/characteristics/index.htm>)

LTA was created to offer a *year round* high quality, holistic education to students within New Castle County. LTA, like its model school Namaste Charter School in Chicago, (<http://www.namastecharterschool.org/>) will use innovative approaches to maximize students' learning experiences by implementing an extended school day with academic and wellness programming. The daily schedule includes a healthy breakfast and lunch, as well as a Family Breakfast Program each week, to ensure students are well-nourished. The school day is extended to almost 9 hours three days of the week and 8 hours two days of the week (with early release on Wednesdays, allowing for teachers to engage in weekly professional development) to allow ample time for regular physical activity alongside high-quality academic instruction and special programming for students. Every day, students engage in 60 minutes of Physical Education and begin the day with "Morning Movement". LTA, similar to Namaste, supports both students and their families by providing meaningful family programming and a Parent Center.

In order to achieve the goals of school health and maximize effectiveness and efficiency, LTA will carry out eight strategies as prescribed by the Centers for Disease and Control Prevention. See *Appendix 2 Section 1.3* for a detailed list of these eight strategies or see website <http://www.cdc.gov/healthyyouth/CSHP/schools.htm>. See *Appendix 3 Section 1.3 Characteristics of an Effective Health Education Curriculum*.

2. **Provide a synopsis of how the proposed instructional design reflects the needs...**
 - a. **The description of the instructional design should include, as appropriate,...**
 - b. **Present evidence that the proposed educational program is research-based...**

a), b). LTA will serve students in grades 9 – 12 who are interested in pursuing the sciences, technology, engineering and math --- STEM. Our Archways are: Biomedical and Global Health Sciences and Processes of Design and Engineering. LTA proposes a rigorous curriculum aligned with the Common Core State Standards to meet the college and career ready skills needed for the 21st century. The 21st century will be very uncertain, constantly changing and throwing up new challenges. It will require people to develop and apply new understandings and adapt to new ways of doing things. Across subjects and learning areas, the curriculum will need to develop student competencies in such areas as: communication, collaboration, critical thinking and problem solving, creativity, managing diversity, peacefully and constructively learning to learn, giving students an enthusiasm for learning and the skills to learn independently throughout their lives.

Teaching Models and Strategies

Staff Development prior to the opening of school is critical to the success of LTA delivering the proper training and direction to staff before our students officially enter the building. The staff will need to clearly understand the vision and mission. Every school develops its own culture that impacts who and what they are and what they will become as a school community.

Project Based Learning

Project Based Learning (PBL) is a key instructional strategy that will be used by LTA. Many of the projects will require integration of math, science, technology and engineering. It is our expectation that English/language arts and social studies will be integrated with the other disciplines. LTA will insist and encourage staff to provide and develop projects that are meaningfully and provide an overlap of content areas. The complexity of projects is to be designed to ensure large overlaps in content integration and research. As students work with each other, their instructors, community practitioners and experts LTA will be collaborative partners on major projects especially during the junior and senior grades. All projects will be demonstrated to the school community and in many cases the community at large. A teacher training guide entitled “A Work that Matters” A Guide to Project Based Learning (Patton & Robin 2012), will be used in the training and, of course, any state resources, information and initiatives will be emphasized.

This advisory group is composed of local, regional, and national people who have been successful in education and other areas. LTA intentionally sought out graduates from the State of Delaware universities who are practitioners and successful in their areas of expertise to advise and assist LTA in its quest to provide a quality meaningful educational experience to students. LTA will be collaborating with other high tech high schools who are using PBL to learn about and share successful projects and school wide report card, i.e. MC² STEM High School Cleveland School District. See websites (<http://www.mc2stemhighschool.org/>), and (<http://reportcard.education.ohio.gov/Pages/School-Report.aspx?SchoolIRN=010200>).

The Staff Development process will be on-going. It will be critical for teachers to understand the difference between a **project and an activity**. Staff Development training will encompass specific examples to explain the difference. Discussions will take place explaining the different

types of work. Curriculum experts Grant Wiggins and Jay McTighe's (1998) "Understanding Design" will be one of the resources used to enhance this discussion. In PBL, performance tasks speaks to the type of work being introduced: Complex challenges, that culminate in one or more products of performance, Range from short-term to multi-dimensional projects, Require students to apply knowledge, skills to solve a problem and Real world audience and context of work. The BRIDGE to Achievement, LLC Group will coordinate staff and leadership training on PBL. *See Appendix 3 Section 1.5 Professional Development for a full layout of staff development.*

Designing Multidisciplinary Integrated Curriculum

Multidisciplinary lessons plans will be modeled around a specific topic or guiding question. For example, perhaps a team of teachers decides to focus on ancient farming in early river civilizations. The historical content is provided by the history department, while math teachers can study archaeological records to find the area of irrigated fields and the amount of water needed to properly fertilize these fields. Science teachers can examine the ecological and agricultural processes behind these ancient methods, and the English department can work with students to summarize this information in an informative essay.

Blended Learning

Blended learning is a purposeful and fundamental design element of our instructional model to accelerate learning towards college and career readiness. To LTA, blended learning represents an opportunity for us to develop into a school that is better positioned to reach the right students with the right resources and interventions at the right time. Blending face-to-face instruction with digital tools allows students to learn independently and at their own pace, freeing up time for teachers to give students more individualized attention and to focus on more complex tasks. Blended learning will allow teachers to help students to "catch up," "keep up," or "speed up."

Class Size and Structure

LTA will use a Combination (Hybrid) Block Schedule with (3) 90-minute blocks for Core and specialized Archway classes on an A/B Block Schedule. LTA will use (1) 120-minute block in which three groups (A, B, C) will be paired on a rotating schedule with lunch (30 minutes), wellness (60 minutes), and RTI (30 minutes). LTA will use (1) 45-minute block on Mondays, Tuesdays and Thursdays for health and (1) 120-minute block on Wednesdays for computers and SAT Preparation. The week will end on Fridays with students having added time for Advisory Center. Students will focus on their electronic, notebook portfolios and Student Success Plans (SSPs) following the guidelines for CTE programs of study outlined in the CTE State Plan -- 10 DE Reg. 1802 (06/01/07). Afterwards, LTA will use (1) 180-minute (3 hours block) in which three groups (A, B, C) will be paired on a rotating schedule that is intended to concentrate on visual and performing arts (60 minutes) or driver's education; wellness (60 minutes); and school organizations and vocational youth group meetings (60 minutes); Technology Student Association (TSA) and Health Occupations Students of America (HOSA), (delcode.delaware.gov/title14/c032).

The student day continues with effective instruction using Best Practices for its Friday's extended day program for students. LTA's 11th and 12th grade students will be involved in internships, job shadowing, early college or entrepreneurship training. The 9th and 10th grade students will engage themselves in elective fitness classes; enrichment and research activities in the Science and Industrial Labs; and character, mentoring and leadership development sessions supported by: the national "Character Counts" program, Brandywine School District "Achievers' Academy" character and leadership role modeling program and the state's Creative Mentoring program with Connecting Generations. *See ATTACHMENT 6 for the Bell Schedule.*

At full capacity, a typical class size will consist of an average of 21 students with 125 students per grade. The first year, 9th and 10th graders will be enrolled with students moving into 11th grade in the second year into 12th grade in the third year, with a target of 500 students by year five.

LTA anticipates that it will serve a diverse student population that includes children of different ethnicity, races, socio-economic backgrounds, and learning abilities in our Best Practices programs of study. **U.S. Secretary of Education Arne Duncan** cited PLTW as "One of the great models of the new CTE succeeding all across the country." "**The U.S. Department of Education:** PLTW is [A]n exemplary program for integrating rigorous and relevant STEM curricula and professional development and improving student achievement in mathematics, science, and English language arts." The University of Delaware has endorsed our curriculum tool of PLTW. LTA staffing will be configured to accommodate 25 students per class. The average student-teacher ratio when including all teaching units is 1:15. *See ATTACHMENT 15 "Staffing to Student Ratio Year One Through Year Five." See Appendix 4 Section 1.3 for the student enrollment chart*

3. Provide an overview of the planned curriculum, including, as Attachment 4, 1 scope....

LTA students will be college and career ready. They will demonstrate the knowledge, skills and abilities that are necessary to successfully complete entry-level, credit-bearing college courses, participate in certificate or workplace training programs, and enter economically viable career Archways. In order to meet this goal, the DDOE has defined a set of learning competencies, intellectual capacities and experiences essential for all students to become lifelong learners; positive contributors to their families, workplaces and communities; and successfully engaged citizens of a global 21st century.

Science

LTA teachers will use the units of instruction available through the Science Coalition, which are based on research-supported instructional practices. Teachers will attend training to ensure that they are able to implement the curriculum with promise for success. LTA teachers will use the units available through the Science Coalition to guide instruction, but when needed, teachers will be able to supplement the Coalition units with the Biomedical Science curriculum from Project Lead the Way and the Global Health Sciences curriculum from ConnectEd. A list of national resource tools are listed on the following website:
(<http://www.commoncoreconversation.com/science->

resources.html#sthash.ux7FP7LJ.kDSKvldw.dpbs). *The signed Memorandum of Agreement to join the Science Coalition is included as ATTACHMENT 4.*

Social Studies

LTA will join the Social Studies Coalition and use the published units and lessons that are based on research and best practices in social studies. To supplement the Social Studies Coalition units, when needed, teachers in the social studies department will collaborate and decide which appropriate additional Best Practices social studies resources to choose from that are Common Core Standards based. A list of national resource tools are listed on the following website: <http://www.commoncoreconversation.com/social-studies-resources.html#sthash.qBJzSdus.dpbs>). Teachers will be guided to select tools that afford students a multi-faceted learning experience that places the student at the center of the learning. A signed copy of the Memorandum of Understanding to join the Social Studies Coalition is included as *ATTACHMENT 4*.

English Language Arts

To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Along with high-quality contemporary works, texts should be chosen from among seminal United States documents, the classics of American literature, and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts.” (CCSS). Literature selections provided in the LTA’s Scope and Sequence are based on the Houghton-Mifflin Harcourt Collections grades 9-12 series and are intended to be instructional tools for teaching the CCSS standards. ELA curriculum maps are included as *ATTACHMENT 4*.

Mathematics

The Interactive Mathematics Program (IMP) resource center provides a brief description of IMP. It states that: “IMP is a growing collaboration of mathematicians, teacher-educators, and teachers who have been working together since 1989 on both curriculum development and professional development for teachers. With the support of the National Science Foundation, IMP has created a four-year program of problem-based mathematics that replaces the traditional Algebra I-Geometry-Algebra II/Trigonometry-Precalculus sequence and that is designed to exemplify the curriculum reform called for in the Curriculum and Evaluation Standards of the National Council of Teachers of Mathematics (NCTM).”

It further states that ... “The IMP curriculum integrates traditional material with additional topics recommended by the NCTM Standards, such as statistics, probability, curve fitting, and matrix algebra. IMP units are generally structured around a complex central problem. Although each unit has a specific mathematical focus, other topics are brought in as needed to solve the central problem, rather than narrowly restricting the mathematical content. Ideas that are developed in one unit are usually revisited and deepened in one or more later units.”

LTA has consulted with the Southern Delaware Professional Development Center College of Arts & Sciences at the University of Delaware for its Math and ELA. Its consultants highly recommend the IMP mathematics program, suggesting that it has outperformed its counterparts in traditional programs. *ATTACHMENT 4.*

Health

The health curriculum is sequential, 9 – 12, and addresses the physical, mental emotional and social dimensions of health. The curriculum design helps to motivate students to maintain and improve their health, prevent disease, and reduce health-related risk behaviors. It allows students to develop and demonstrate increasingly sophisticated health-related knowledge, attitudes, skills, and practices. The curriculum includes 7 content strands for the half credit:

- Healthy Eating for Life -- Nutrition
- Fitness for Life
- Drugs, Alcohol and Tobacco
- Making Proud Choices
- Communicating Through Feelings
- Healthy Relationships

LTA's Health program is a comprehensive program that integrates the extensive instructional resources found on the DDOE website, the Prentice Hall Health "Discovery Education" curriculum and the Global Health Sciences curriculum from ConnectEd, Nemours Health Prevention Program, CDC Health maps and course tools are included as *ATTACHMENT 4.*

Physical Education

Physical Education is an integral part of the education program for all students. It teaches students how their bodies move and how to perform a variety of physical activities. Students learn the health-related benefits of regular physical activity and the skills to adopt a physically active, healthy lifestyle. The discipline also provides learning experiences that meet the developmental needs of students. With high-quality physical education instruction, students become confident, independent, self-controlled, and resilient; develop positive social skills; set and strive for personal, achievable goals; learn to assume leadership; cooperate with others; accept responsibility for their own behavior; and, ultimately, improve their academic performance. The curriculum includes 12 content strands for the one full credit. LTA's Physical Education program is a comprehensive program that integrates the extensive instructional resources found on the DDOE website. Physical Education maps and course tools are included as *ATTACHMENT 4.*

60 Minutes of Wellness

9th and 10th Grade Wellness

Delaware Department of Education requires that each student earn one credit in Physical Education and a half credit in Health. LTA requires that each 9th and 10th grader earn a combined semester of "Fun Fitness" and Thematic Health Education specifically designed for each 9th and 10th grader to equate 60 minutes of wellness each day. The classroom Thematic Health topic will be integrated with the fitness activity in order to encompass the full 60 minutes of daily wellness. LEAN will adopt a Thematic Health topic from Needham High School

for each grade level. Students may select the fitness activity of their choice. LTA will offer the following fun fitness activities for all grades: yoga, dance, aerobics, cycling, body pump, step, weight lifting, PE basketball and Zumba.

11th and 12th Grade Wellness

Once a student reaches 11th grade and have completed the state's requirements for PE and health, they will continue movement activities each day for 60 minutes. Students will be required to select and enroll in two semester courses each year from the Fun Fitness list of activities. The Thematic Health topic will be integrated into the fitness activity each day in order to encompass the full 60 minutes of daily wellness. (Fun Fitness 45 minutes/Thematic Health topic 15 mins.) *See Appendix 7 – 60 Minutes of Wellness.*

Processes of Design and Engineering

LTA will join the International Technology and Engineering Educators Association (ITEEA) Engineering by Design™ (EbD). LTA's students will use the "Engineering Design" textbook, Second Edition, a Standards-Based High School Model Course Guide textbook for its foundation courses. As a member of ITEEA's Engineering by Design™ Consortium, LTA will have access to many other resources such as: ITEEA's products, publications, training, scholarship and grant opportunities, teacher recruitment services, student competitions, classroom product catalogs and more. The Consortium's STEM Center for Teaching and Learning™ was established in 1998 to strengthen professional development and advance technological literacy. Their center initiatives are directed toward four goals: development of standards-based curricula; teacher enhancement; research concerning teaching and learning; and curriculum implementation and diffusion. See LTA's Student Handbook *in Appendix 5 Section 1.3* for an explanation of each of the four Processes of Design and Engineering courses including the capstone course. See Processes of Design and Engineering maps are included as *ATTACHMENT 4*.

Spanish

LTA's teachers will use Realidades a Digital Edition ©2014; which provides standards-based instruction that seamlessly integrates vocabulary, grammar, communication, culture, and digital learning. This balanced approach is built upon the principles of backward design with assessment aligned with instruction. Spanish curriculum maps are included as *ATTACHMENT 4*.

Visual and Performing Arts

Art is vital to the educational enrichment of all students. LTA's Art Department will offer stimulating courses that focus instruction on basic and advanced skills required for students to express themselves creatively. The program promotes learning and provides experiences to motivate students to excel in the academics as well as the arts. It is the goal of the Visual and Performing Arts Program to assist students in developing to their fullest potential. Visual and performing arts teachers will use various teacher developed resources. Visual and Performing Arts curricula maps are included as part of *ATTACHMENT 4*. *See Appendix Addendum 2 Section 1.3 for Course Descriptions.*

http://www.doe.k12.de.us/infosuites/staff/ci/content_areas/technology_ed.shtml

LTA will infuse ConnectEd's "GoodEats" An Integrated Curriculum Unit on Nutrition and Health, in each core content subject. (ELA, Math, Science and Social Studies). Sample units include: Food Fundamentals, Nutrition and Growth and Obesity: An Expanding Problem. Each unit poses an essential question, unit summary, culminating event, key questions/issues, learning scenarios to kick off the unit, biomedical/healthcare and education partner roles and national standards. LTA's believes that by adopting the *GoodEats* curriculum, students in New Castle and northern Kent County will become trailblazers in the state on the topic of wellness. LTA will inherently lead the way by introducing this 21st century concept of a total health and nutrition school program. See the GoodEats Curriculum in ATTACHMENT M.
http://connectedcalifornia.org/downloads/curriculum/GoodEats_CA.pdf

4. Provide, as Attachment 5, 1 Mathematics unit with corresponding summative

See ATTACHMENT 5.

5. Describe how the school will ensure that all students have equitable access to the curriculum...

All students entering LTA will go through a student/parent/guardian intake process. This will be an actual meeting interview to discuss the school its vision and mission. During this process the student will be able to express their attitude about school, LTA and future plans from their perspective. When entering the school, all students will have open access to all school programs. As students learn more about the school they will be allowed to choose the direction they want to proceed in academically in our core curriculum, Biomedical and Global Health Sciences and Processes of Design and Engineering Archways.

LTA plans to fully engage our students in open discussions about their education. One of the most powerful strategies LTA will use in the classroom is to make learning relevant. LTA will do this encouraging and insisting that staff place academics within context as it relates to issues and problems from the real world of work. Across the United States school teachers, administrators and parents have seen students change their attitudes and perspectives when they are solving problems and working on projects that link their academics and technical course to an authentic career—related and work—related theme. It is our belief that by planning and designing Multidisciplinary Integrated Curriculum Units, student will see how each course integrates knowledge but most importantly see why all aspects of their learning adds "holistic" worth to education and life in general. By delivering a standards-based Multidisciplinary Integrated Curriculum this allows us to use these instructional strategies that will address many of our state, national and local objectives around high school improvements. LTA has a direction and approach that is designed to reach high school students at all academic levels. The goal is to be able to support learning for all students who may have diverse backgrounds and learning styles. LTA wants to replace academic tracking of students with placement based on student needs, interest and work habits. LTA wants to: (1) Shift classroom instruction from passive to active, (2) Review test data to drive instructional decisions, (3) Help student develop necessary skills, (4) Reach out to diverse groups of students who bring to the classroom different experiences, backgrounds and learning styles, (5) Provide students with knowledge about career related fields and (6) Build community support through partnerships and other opportunities and career connections.

6. Describe the methods and systems that teachers will use to provide differentiated....

LTA is aware that students will bring many different learning styles and multiple intelligence connections. LTA plans to acknowledge and deal with differences by differentiating instruction and instructional strategies at the appropriate time for students on an individual basis. The classrooms and overall school environment must be designed in a way to handle and accommodate differences in: Learning Styles, Interest, Prior Knowledge, Socialization Needs and Comfort Zones.

At LTA it means creating a balance between the content and competencies expected on mandated assessments and various pedagogical options to maximize durable learning. Amy Benjamin's (2002) *Eye on Education Best Practices* -- a differentiated instruction guide for middle and high school teachers demonstrates how to make the classroom more responsive to the needs of individual students with a wide variety of learning styles, interests, goals, cultural backgrounds, and prior knowledge. Focusing on grades 6 through 12, it showcases classroom-tested activities and strategies.

Differentiated instruction within an integrated curriculum aims to address each student's needs where they are and increase their chances of learning by:

- Approach to learning that is student centered,
- Presenting diverse ways of exploring core concept,
- Creating multiple venues and opportunities to apply core concepts in different and diverse situations,
- Allowing a variety of projects that take into account students different learning styles and multiple intelligences that connects and clarifies strengths and weaknesses,
- Helping students be aware and understand learning styles,
- Conducting learning style testing,
- Pushing students to delve deep with rigor in their classrooms, on projects and community activities and
- Helping students understand and believe they can achieve success

All students will engage in Project Based Learning through the use of technology and interdisciplinary inquiry based lessons. Based on the CCSS and RTI tiered assignments, incorporating student learning styles and multiple intelligences, differentiated instruction will be used in order to meet the academic needs of all learners including those who are academically gifted and talented. In Project Based Learning LTA will use researched best practices for our academically gifted and talented. Teachers will provide differentiated instruction by creating opportunities for students to work collaboratively in teams or independently. Instructional strategies including summarizing, questions, and graphic organizers will be used throughout the learning process. Teachers will use real-world problems to capture students' interest in order to provide critical thinking by presenting students with a problem to solve, a phenomenon to investigate, and a mode to design or a decision to make. Students will be given some choice about subtopics as well as an opportunity to reflect on their learning using student success goals. Authentic assessments will be used to measure student outcomes and/or products.

7. Provide a synopsis of plans for additional academic support for at-risk ...

High expectations will be recognized as key to the success of our students, especially those at risk. LTA will conduct diagnostic assessments when students enter LTA. LTA will continue to monitor the student's needs so support for learning can be provided before failure occurs. LTA will provide early intervention programs so children can maintain a sense of success and self-esteem. LTA will work to ensure that at-risk students are provided a variety of opportunities for academic support. All teachers will participate in professional development relating to the delivery of differentiated course content and to the building of a tool-kit of multiple learning and mentoring supplements (such as the Achievers' Academy, Connecting Generations – Creative Mentoring, The Beehive.org, HomeworkSpot.com, and differentiated readings) to support students. Professional development opportunities will be provided to help teachers establish a priority on teaching advanced thinking skills to all students. LTA's teachers will develop specific frameworks, heuristics, and strategies that engage at-risk students. The School Leader will help teachers appreciate the strengths, experiences, and cultures of their students so that classrooms can be as comfortable as possible for all students.

Departments will develop a rotating after-school tutoring schedule that will provide subject-based tutoring to students in need. The school will also create a student tutoring core by implementing a peer tutoring program. Students who volunteer their time as peer tutors for this program will receive credit toward community service hours. This first level of support will be for students who are struggling with a specific content area, not with the general content or their aptitude. For students in need of deeper intervention who demonstrate risk for academic failure, the RTI process will be initiated as described in the 'Special Populations' section below. The Student Success Team (SST) will actively monitor and address students who are at-risk academically in a tiered support system, including testing for special education services if necessary. Supports will be outlined in IEP/504 plans and will be implemented in a timely manner either with existing staff or through contracted related services.

At-risk students who do not have identified disabilities and are not performing academically will be asked to sign and complete an academic contract that outlines the plan to address academic deficits and documents the partners who will support the student in addressing deficits. The student, parents/guardians, teachers, and School Leader will all sign the contract and commit to supporting the student to improve his/her academic performance. This plan will be monitored on a weekly basis by the student's advisor who will report to the SST, the student's parents or guardians, and the School Leader on the student's academic progress. Teacher-parent partnerships will be formed to improve the school-home connection for parents to promote learning for at-risk students. A parent "Structures for Involvement" group will help develop structures for involvement that encourage parents and families to participate in the school.

Students will be taught how to plan, organize and evaluate their own learning in advisories in a portfolio assessment that will enhance student engagement and self-monitoring. Teachers will use as a reference: Working Toward Student Self-Direction and Personal Efficacy as Educational Goals - info@ncrel.org. Teachers will also establish cooperative learning and partner work in the classroom so students can learn with and from each other.

8. Explain how the graduation requirements will ensure student readiness for college....**Student Performance Goals** [14 Del. C. § 512(4) and (6)]

Delaware took a major step toward improving low college graduation rates that are holding back the capabilities of our workforce nationwide. Governor Jack Markell and Secretary of Education Mark Murphy joined researchers from the Strategic Data Project (SDP), a program of the Center for Education Policy Research at Harvard University, to release findings on Delaware students' college readiness, enrollment and retention, presenting one of the first thorough analyses done for any state by SDP. The project continues the data-driven approach to student achievement that helped Delaware win the Race to the Top federal funding competition. See the full report at <http://news.delaware.gov/2013/07/16/delaware-takes-the-lead-in-tackling-college-readiness-and-retention/>

LTA will strictly adhere to the state requirement for graduation that ensures student readiness or college and post-secondary opportunities as stated in Title 14 Education - 500 Curriculum and Instruction.

Career Pathway – LTA will offer two exceptional research based career archways/pathways: Biomedical Science and Global Health Sciences and Processes of Design Engineering. Students will begin their respective archway/pathway as 9th graders. Students will complete four course sequentially in their prescribed archway/pathway.

Core Course Credit –Students at LTA are required complete at least 4 credits in English Language Arts (ELA), 4 credits in math (one credit must be taken during their senior year), 3 credits in Social Studies, 3 credits science, and 2 credits in the same world language. The state requires 1 credit in PE and a .5 credit in Health, as required in 14 DE Admin. Code 501. Since LEAN is a health and wellness school, students will be engaged in fitness activities 60 minutes each day for all four years. Students will graduate with a total of 4 health and wellness credits.

Credit -- means the acquisition of skills and knowledge at a satisfactory level as determined by the district and charter school boards through 135 hours (a Carnegie Unit) of actual classroom instruction or through locally approved options contained in Section 8.0. If students are not in school, they cannot perform to LTA's and the state of Delaware high quality standards. LTA'S attendance policy will be publicized on its website, in student and parent handbooks, in monthly newsletters and also regularly reiterated by student advisors, teachers and staff. Our holistic approach to education in our coordinated health program with the CDC will curtail many attendance problems and issues that students are typically confronted with as adolescents. LTA students will meet the attendance requirement for full and half credit courses through excellent attendance habits. LTA's students will know that – "Failures is not an option."

College and Career Readiness – LEAN Tech Academy's initiative is designed to promote a foundation for academic growth, second to none, in the State of Delaware. LEAN Tech Academy is prepared to do this with dramatic, innovative and proven ideas that will prepare our students for the every changing demands of the 21st Century. By the time our students graduate from LTA, our students will have a competitive edge over other Delaware high schools students to enroll in post-secondary institutions, obtain scholarships, and have licensed certificates to apply for a variety of jobs and careers throughout Delaware and the nation.

http://www.betterhighschools.org/CCR/documents/NHSC_CCROrganizer_2012.pdf